

# Curriculum Vitae

**Name:** Andrii

**Surname:** Liashyk

**Place of birth:** Ukraine, Rivne

**Date of birth:** 09/05/1992

**Citizenship:** Ukraine

**Marital status:** Single

**e-mail:** a.liashyk@gmail.com

**Employment:**

2020-2022: Research scientist, Center for Advanced Studies, SkolTech, Moscow, Russia

2016-2019: Junior research scientist, NRU HSE, Moscow, Russia

**Education:**

2016-2020: Skolkovo Institute of Science and Technology, Moscow, Russia

2015-2018: Bogolyubov institute for theoretical physics, Kyiv, Ukraine

2013-2019: Mathematal Faculty, NRU HSE, Moscow, Russia

2009-2015: Physical Faculty, National Taras Shevchenko University of Kyiv, Ukraine

2007-2009: Ukrainian Physics and Mathematics Lyceum, Kyiv

**PhD degree:** 21/01/2020, Bethe vectors and their scalar products in quantum integrable models

Advisor: Zabrodin A.V.

**Master degree:** 30/06/2015, Quantum integrable magnets and classical particle system

Advisor: Marshakov A.V.

**Bachelor degree:** 31/05/2013, Asymptotic of correlation function of 2D Ising model

Advisor: Iorgov N.Z.

**Scientific interests:** Mathematical physics, Quantum and Classical Integrable Models, Exactly Solved QFT, Bethe Ansatz

**Languages:** Ukrainian(native), Russian(fluent), English(upper-intermediate)

## Papers:

1. A. Liashyk, S. Z. Pakuliak, *Recurrence relations for off-shell Bethe vectors in trigonometric integrable models*, Phys. A: Math. Theor. 2022 (55) 075201 [math-ph/2008.03664]
2. A. Liashyk, S. Z. Pakuliak, *On the R-matrix realization of quantum loop algebras*, SciPost Phys. 12, 146 (2022), [math-ph/2008.03664]
3. A. Liashyk, S. Z. Pakuliak, *Algebraic Bethe ansatz for  $o_{2n+1}$ -invariant integrable models*, TMF, 206:1 (2021), 23–46; Theoret. and Math. Phys., 206:1 (2021), 19–39 [math-ph/2008.03664]
4. A. Liashyk, S. Z. Pakuliak, *Gauss coordinates vs currents for the Yangian doubles of the classical types*, SIGMA 16 (2020), 120 [math-ph/2006.01579]
5. A. Hutsalyuk, A. Liashyk, S. Z. Pakuliak, E. Ragoucy, N. A. Slavnov, *Actions of the monodromy matrix elements onto  $gl(m|n)$ -invariant Bethe vectors*, Journal of Statistical Mechanics: Theory and Experiment 2020.9 (2020), 093104 [math-ph/2005.09249]
6. A. Liashyk, S. Z. Pakuliak, E. Ragoucy, N. A. Slavnov, *Bethe vectors for orthogonal integrable models*, Theoret. and Math. Phys. 201 (2019) 1545-1564, [math-ph/1906.03202]
7. A. Liashyk, S. Pakuliak, E. Ragoucy, N. Slavnov, *New symmetries of  $gl(N)$ -invariant Bethe vectors*, J. Stat. Mech.: Theory Exp. 2019 (4), 044001, [math-ph/1810.00364]
8. A. Liashyk, N. Slavnov, *On Bethe vectors in  $gl_3$ -invariant integrable models*, JHEP 06, 018 (2018), [math-ph/1803.07628]
9. A. Hutsalyuk, A. Liashyk, S. Pakuliak, E. Ragoucy, N. Slavnov, *Scalar products and norm of Bethe vectors for integrable models based on  $U_q(\hat{gl}_m)$* , SciPost Phys. 4, 006 (2018), [math-ph/1711.03867]
10. A. Hutsalyuk, A. Liashyk, S. Pakuliak, E. Ragoucy, N. Slavnov, *Norm of Bethe vectors in  $gl(m|n)$  based models*, Nucl. Phys. B926 (2018) 256-278, [math-ph/1705.09219]
11. A. Hutsalyuk, A. Liashyk, S. Pakuliak, E. Ragoucy, N. Slavnov, *Scalar products of Bethe vectors in the models with  $gl(m|n)$  symmetry*, Nucl. Phys. B, 923 (2017) 277-311, [math-ph/1704.08173]
12. A. Hutsalyuk, A. Liashyk, S. Pakuliak, E. Ragoucy, N. Slavnov, *Current presentation for the super-Yangian double  $DY(gl(m|n))$  and Bethe vectors*, Russian Mathematical Surveys 72 (1), 33 (2017), [math-ph/1611.09620]
13. A. Liashyk, D. Rudneva, A. Zabrodin, A. Zotov, *Asymmetric six-vertex model and the classical Ruijsenaars-Schneider system of particles*, Theor.Math.Phys. 192 (2017) no.2, 1141-1153, [hep-th/1611.02497]
14. A. Hutsalyuk, A. Liashyk, S. Pakuliak, E. Ragoucy, N. Slavnov, *Form factors of the monodromy matrix entries in  $gl(2|1)$ -invariant integrable models*, Nucl. Phys. B911 (2016) 902, [math-ph]/1607.04978]
15. A. Hutsalyuk, A. Liashyk, S. Pakuliak, E. Ragoucy, N. Slavnov, *Scalar products of Bethe vectors in models with  $gl(2|1)$  symmetry 2. Determinant representation* J. Phys. A50 (2017) 034004, [math-ph]/1606.03573]
16. A. Hutsalyuk, A. Liashyk, S. Pakuliak, E. Ragoucy, N. Slavnov, *Scalar products of Bethe vectors in models with  $gl(2|1)$  symmetry 1. Super-analog of Reshetikhin formula* J. Phys. A49 (2016) 454005, [math-ph]/1605.09189]
17. A. Hutsalyuk, A. Liashyk, S. Pakuliak, E. Ragoucy, N. Slavnov, *Multiple Actions of the Monodromy Matrix in  $gl(2|1)$ -Invariant Integrable Models* SIGMA 12 (2016), 099, [math-ph]/1605.06419]
18. M. Bektov, A. Liashyk, A. Zabrodin, A. Zotov, *Trigonometric version of quantum-classical duality in integrable systems*, Nucl. Phys. B(2015) 150–163, [hep-th/1505.00259]

## Talks:

1. *On Bethe vectors in  $gl(3)$ -invariant integrable models / New symmetries of  $gl(N)$ -invariant Bethe vectors*, Seminar "Modern Problems and Methods of Statistic Physic", (Wuppertal, 12 December 2019)
2. *On Scalar Product of Bethe Vectors*, Workshop on "Classical and Quantum Integrable Systems", (Saint-Peterburg, 22-26 July 2019)
3. *New determinant representations of scalar products in integrable models associated to higher rank algebras*, Recent Advances in Quantum Integrable Systems, (Annecy, 10-14 September 2018)
4. *On Bethe vectors in  $gl(3)$ -invariant integrable models*, Workshop "Classical and Quantum Integrable Systems", (Protvino, 2-6 July 2018)
5. *Form factors in  $gl(2|1)$ -invariant integrable models*, Seminar "Modern Problems and Methods of Statistic Physic", (Wuppertal, 7 December 2017)
6. *Sum formula for scalar product of off-shell Bethe vectors*, Integrable Models in Statistical Mechanics, Limit Shapes and Combinatorics, (St. Petersburg, 7-11 August 2017)
7. *Scalar product of off-shell Bethe vectors in  $gl(2)$  case*, Representation Theory and Integrable Systems, (Amsterdam, 15-24 May 2017), joint UvA-Skoltech student workshop
8. *Form factors in  $gl(2|1)$ -invariant integrable models*, Random Geometry and Physics, (Paris, 17-21 October 2016)

**Fellowships:**

- 2017-2019: Young Russian mathematics fellowship